A Customer Requirement Based Quality Planning and Improvement for Tourism

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Abstract

Economic growth, rising GDP and changing consumption habits have increased the popularity of tourism. Simultaneously with this trend, consumers are paying increasing attention to the quality of travel routes, scenic spots and accommodation. Collecting and understanding consumer requirements related to tourism and thus designing suitable tours is important for travel agents. This study adopts consumer desire and tourist motivation as a basis to analyze tourism services. This study integrates the Kano two-dimensional quality model and quality function deployment (QFD) to construct a systematic mechanism for tourism planning and improvement. This study comprises three parts: travel requirement survey; extraction of key tourism quality factors; the proposal of ways to improve tourist services. In the study of travel, a two-dimensional quality questionnaire is designed and used to survey consumer travel motivations. Based on the survey results, two types of key quality factorsthat are attractive and must-be quality can be extracted by the Kano model. To extract attractive and essential qualities, quality function deployment transforms the key quality factors into improvement action plans. These action plans can enable travel entrepreneurs to develop suitable tours to meet the requirements of different groups, thus enhancing consumer satisfaction and increasing tourism market competitiveness.

Keywords

Tourism Motivation; Kano Model; Quality Function Deployment

Introduction

Since the 1980s, due to the economic growth, it has been witnessed that people in numerous countries have improved their living quality and consumption capacity, driving a culture of leisure travel. The tourism market thus gains momentum, and new attractions have developed, providing consumers with considerable choices. Facing this trend, many countries recently have committed themselves to tourism development, and accordingly having promoted various policies, such as providing grants, visas, and tourist attractions, etc. These will help tourism industry growth.

Tourism can be broadly divided into the following four types: "play tourism" Play-based enjoyment of scenic, recreational facilities play; "family tourism" Tourism simultaneous with visiting friends and relatives and promoting family relationships; "social tourism " Business travelers taking the opportunity to visit local attractions to enhance friendships; "health tourism" relieving stress and restoring physical and mental fatigue through tourism. Tourist motivation is what leads people to travel, and tourism activities meet these tourism needs (Beerli and martin 2004). Crompton (1979) noted that travel motivation has both psychological and cultural dimensions. The psychological motivations includeTemporarily escaping from the secular environment; regarding a holiday as an opportunity to engage in self-exploration and evaluation; Physical and mental relaxation; Increasing prestige deriving satisfaction; Physical and mental restoration (such as through engaging in childish, irrational, non-suppressed behavior); Providing opportunities for family reunions or consolidation of parent-child relationships; Interaction with the destination population. While cultural motivations include Novelty, such as curiosity, adventure; educational value of destination. Additionally, Dann (1977) classified tourism motivation using push and pull factors. Push factors result from the social and psychological drivers of tourism, as well as inner imbalances or motivational factors resulting from nerves, such as curiosity, reputation, pleasure, escaping daily work, self-exploration, etc. Pull factors and objective characteristics of the items are used to attract links from the tourists on the target property resulting from the cognitive, attract people to the attractive features

of a particular destination, such as beaches, sun, snow, mountains, etc.. Gnoth (1997) thought that tourism is driven by the inner desire of consumers to pursue goals. Pull is the target set by tourists and generated by the cognitive, and uses destination knowledge to attract consumers. The destination of the cognitive behavior thus affects consumers. Generally, Push and Pull is the integrated theory, supply (external factors) have needs (inner factors), supply determines demand generation, and most studies have focused on how to improve supply; the literature thus has focused on how to encourage consumers to travel more, while overlooking generation and demand-side causes (Chon, 1989; Cha *et al.*, 1995; Uysal and Jurowski, 1994). Tourist travel motivation can be classified according to type of travel and tourist decision-making process, satisfaction evaluation, consumer behavior and cognitive architecture, and the analytical results can be used to develop marketing strategies (Swanson and Horridge 2006). Previously, relatively little tourism-related research explored the generation and demand-side causes, so consumer demand neglected is an important part, and there are few customers from the sales side with the end of classified, if this classification the focus of the customer base typr of travel services designed to enhance the value of travel products and customization capabilities, to reduce bias and customer perception of service delivery and cost (Klenosky 2002; Kim *et al.* 2003). Therefore, understanding individual tourist travel motivations and sources of satisfaction can help clarifying the motivations for tourist participation in tourism activities, and thus helpful in developing attractive itineraries (Crompton, 1979; Dann, 1981; Chon, 1989).

Facing tourism related issues and research, this study seeks to understand consumer desire for tourism products, basis the analysis on tourist motivation (Kim *et al.* 2003),integrates the Kano quality model and quality function deployment method with the quality of tourism planning and constructs a systematic improvement mechanism. To analyze tourism product development and understand the composition of tourism itinerary of tourist motivation based on the push pull theory, this study uses the quality function deployment method to improve program planning quality and concrete action plans. The effective development of the tourism industry can satisfy the needs of different consumer groups, and enhance consumer satisfaction and the overall tourism travel market.

Research Framework

This study employs the push-pull travel motivation theory as a basis and investigates the internal demand resulting from consumer travel behavior factors to obtain different information, in addition, it also applies the quality of Kano model analysis to consumer travel demand and the quality function deployment method to identify the inner needs of consumers and thus developing a tourism action plan, in which a three stage research framework is adopted as described in FIG.1.
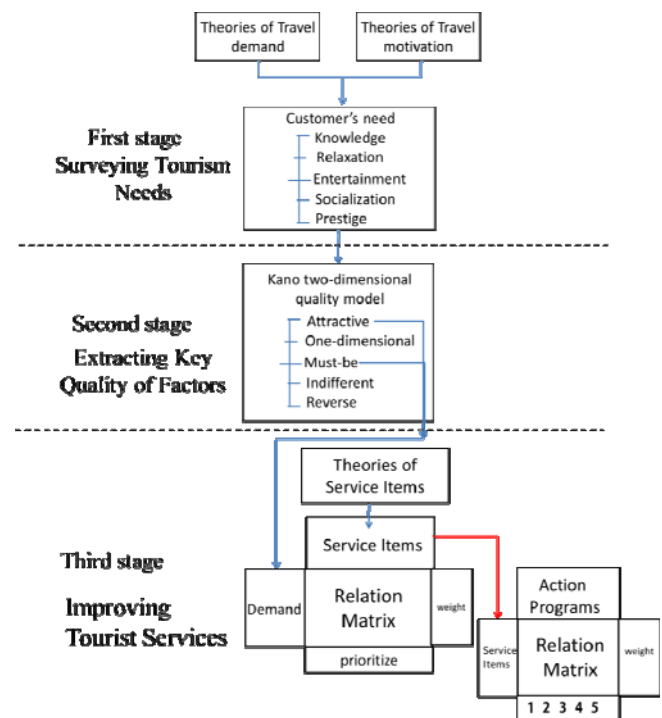

FIG. 1 RESEARCH FRAMEWORK

Stage 1: surveying tourism needs

The main objective of surveying tourism needs is to collect the tourism needs theory and the motivation of the push pull theory. To explore the inner drivers of consumer travel behavior, these drivers are divided into five types: knowledge, relaxation, entertainment, social and reputation.

Stage 2: extracting factor quality

Consumer demand is examined based on the results of the survey on consumer tourism needs and the design of a two-dimensional quality questionnaire. This study then uses the Kano two-dimensional quality model to summarize the travel demand analysis with a focus on five key service qualities that can continue to strengthen and improve overall quality.

The concept of two-dimensional quality was first

proposed by Frederick Herzberg (1959). The MH theory of motivation (Motivator-hygiene theory) was first used in in employee incentives, known as the Motivator-Hygiene Theory or two-factor theory of job attitudes. Kano *et al.* (1984) proposed a model inspired by the motivator-hygiene model of Herzberg and classified the quality attributes into five categories, namely: attractive, essential, one dimensional, indifferent, and reverse quality attributes. Kano *et al.* (1984) represented these quality attributes as shown in FIG. 2.

1. The must-be quality: Customers become dissatisfied when this product attribute is low or absent. However, customer satisfaction does not rise above neutral with increases in this product attribute.

2. The one-dimensional quality: Customer satisfaction is a linear function of product attribute performance (quality). Increasing attribute performance enhances customer satisfaction.

3. The attractive or excitement quality: Customer satisfaction increases linearly with growing attribute performance. However, customer satisfaction does not decrease correspondingly with a decrement in criterion performance.

4. Indifferent quality: Customers have no special feelings or reactions with regard to these quality elements and their fulfillment. That is, these elements have no influence on customer satisfaction.

5. Reverse quality: These quality elements cause customer dissatisfaction. Most customers do not like this quality factor. Kano *et al.* called this quality factor "reverse quality" or "one dollar quality".
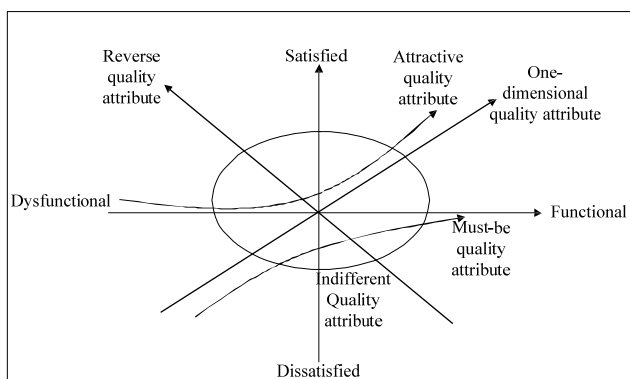

FIG. 2 THE KANO MODEL

The application of the Kano model includes: customer requirement evaluation, product design and manufacturing and service quality study and improvement (tourism, hospital, restaurant and retail) (Matzler and Hinterhuber, 1998; von Dran *et al.*, 1999;

Shahin, 2004; Tontini, 2007).

Stage 3: improvment of tourist services

This stage uses the quality function deployment method to build the house of quality with tourist service items into a service-related matrix expansion plan. QFD, a customer-driven product development tool, is used as a structured management approach to efficiently translate customer needs into design requirements and parts deployment, and to manufacture plans and controls in order to increase customer satisfaction. Quality function deployment has systematically improved the quality of functional parts and components and translated customer expectations, into directions and actions intended to fulfill specific requirements. Through these efforts, organizations that correctly implement QFD can improve their engineering knowledge, productivity, and quality and reduce costs, product development time, and engineering changes (Besterfield *et al.*, 2003; Yang and Fang, 2003; Raharjo *et al.*, 2008). QFD has been well applied in numerous fields. Furthermore, QFD has been adopted to develop products and services (Hsu *et al.*, 1997; Leary and Burvill 2007), and to facilitate the planning, assessment and upgrading of managerial systems (Yang *et al.*, 2006; Büyüközkan *et al.*, 2007).

Tourism Demand Investigation and Classification

According to the study of traveling demand, this study collects references related to push-pull and demand theory to discuss customer internal motivations and their influence on traveling behavior. Based on the research of Beerli and Martin(2004) regarding the influence of motive on emotions, this study identifies five dimensions within the push motivation driver travelthat are knowledge, relaxation, entertainment, socialization and prestige, in which the issue what customers hope to gain from a tripo has been summarized. This study takes these five dimensions as a starting point, and considers what qualities a travel service should offer so as to meet customer needs and enhance customer satisfaction. Additionally, this study develops 28 questionnaire items, and a questionnaire containing a total of 56 questions. The instructions regarding each dimension and the arrangement of the questionnaire items are summarized below.

1. Knowledge: The knowledge dimension includes visiting various things, knowing different cultures,

better understanding the travel destination or participating in local celebrations and festivals. Six questionnaire items deal with this dimension.

2. Relaxation: The relaxation dimension includes physiological and psychological rest, ending original life environment, releasing pressure and anxiety from daily routine. Six questionnaire items deal with this dimension.

3. Entertainment: The entertainment dimension includes seeking excitement, taking challenges, pursuing new things and achieving satisfaction, all of which provide happiness. Six questionnaire items cope with this dimension.

4. Socialization: The socialization dimension contains all the factors that improve the relationship between an individual and their social life. Five questionnaire items deal with this dimension.

5. Prestige: The prestige dimension includes realizing personal dreams, gaining affirmation from others, to satisfy and respect demands and gaining satisfaction and respect. Five questionnaire items deal with this dimension.

Traditionally, the Kano questionnaire is designed based on the two-dimensional concept. Regarding attributes of service quality, positive and negative query items are necessary. For the design of the questionnaire in traveling demand, this study does not adopt the traditional method of clearly differentiating the positive and negative aspects of the questioned items. Instead, this study corrects the meanings of the questions based on the perspectives of psychology and tourism and attempts to make the positive and negative questions related to the same questioned item considered entirely separate (Table 1). Furthermore, that the aim of the study is that by means of analysis the quality elements will become more accurate and closer to customer demand. Besides, the method of answering questions changes from checking boxes to letting interviewees personally record the question numbers on an X shaped answering list (Fig. 3), thus avoiding misunderstanding with respect to the five choices. Official questionnaires are directly dispatched to conduct the practical investigation. This study has issued a total of 153 questionnaires, all of which were returned. The interviewees include customers who have registered travel journey in the travel agency and passengers who are preparing the travel abroad at the airport. The completed questionnaires included 150 effective questionnaires and three invalid

questionnaires. Women accounted for the largest percentage of interviewees (55%) and most respondents (65%) ranged in age between 20~29 years old. The majority of respondents (82%) earned annual incomes of 500,000 NTD. Furthermore, most of the interviewees (77%) were unmarried, and 51% were students. Approximately 86% of interviewees had traveled abroad, and 61% inhabited the Taipei area.

TABLE 1 TWO-DIMENSIONAL QUESTIONNAIRE EXAMPLES OF QUESTIONS

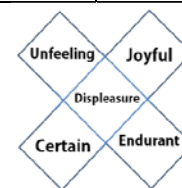| Asked item	
Seeking for excitement and fun	
Positive question	Negative question
How do you think that the itinerary focus on the general schedule?	How do you think that there are more challenges and extreme activities in the itinerary?

FIG. 3 X-ANSWER COLUMN

Extraction of Key Tourism Quality Factors

The results obtained for customer demand in the Kano two-dimensional quality model are used together with the two-dimensional model of quality element evaluation to classify feelings into: "joyful, certain, unfeeling, endurant, and displeasure" (Table 2).

TABLE 2 TWO-DIMENSIONAL QUALITY CLASSIFICATION

Insufficient / sufficient	joyful	certain	unfeeling	endurant	displeasure
joyful	Unable to determine	Attractive quality	Attractive quality	Attractive quality	One-dimensional quality
certain	Reverse quality	Indifferent quality	Indifferent quality	Indifferent quality	Must-be quality
Unfeeling	Reverse quality	Indifferent quality	Indifferent quality	Indifferent quality	Must-be quality
Endurant	Reverse quality	Indifferent quality	Indifferent quality	Indifferent quality	Must-be quality
displeasure	Reverse quality	Reverse quality	Reverse quality	Reverse quality	Unable to determine

Based on the Kano two-dimensional questionnaire, this study classifies the 28 quality demands of consumers in relation to travel service into Attractive, One-dimensional, Essential, Indifferent and Reverse quality elements. Furthermore, the followings are used to classify every quality element according to the questionnaire results. Eleven items are classified as attractive quality elements, three of which are simultaneously assigned to other categories. Not a

single item is classified as an Essential or One-dimensional quality element. Furthermore, four items are classified as reverse quality elements and three are classified as compound quality elements. Meanwhile,

18 items are classified as indifferent quality elements and four as compound quality elements. Moreover, one element quality cannot be judged. Table 3 lists the outcome of two-dimensional quality classification.

TABLE 3 TWO-DIMENSIONAL QUALITY OF TOURISM DEMAND CLASSIFICATION

Dimensions	The question of quality factors	Attractive quality	One-dimensional quality	Must-be quality	Reverse quality	Indifferent quality	Unable to determine	Elements Classification
knowledge	To tour historical sites and ancient relics watch	23%	15%	11%	9%	40%	2%	Indifferent
	to know the characteristic culture	38%	17%	4%	3%	19%	19%	Attractive
	to experience the novel and different life	42%	20%	9%	1%	19%	9%	Attractive
	to contact the new technology	31%	3%	1%	19%	25%	21%	Attractive
	to strengthen your language skill	39%	8%	2%	5%	35%	9%	Attractive
	to taste the local food	33%	21%	17%	4%	21%	4%	Attractive
relaxation	Temporary or permanent change in the way of life	20%	3%	7%	14%	51%	5%	Indifferent
	to leave the current life circle	38%	7%	7%	10%	19%	19%	Attractive
	To restore physical and mental balance	12%	3%	3%	33%	39%	10%	Indifferent
	To improve and enhance health	11%	18%	17%	11%	31%	11%	Indifferent
	To have more free time to travel	47%	9%	4%	6%	27%	7%	Attractive
	To express the pressure	9%	3%	3%	31%	48%	7%	Indifferent
entertainment	To make you feel pleasant	21%	1%	2%	13%	22%	41%	Unable to determine
	To seek exciting and stimulating experiences	17%	11%	2%	23%	38%	9%	Indifferent
	To meet the desire of shopping	9%	12%	3%	41%	33%	3%	Reverse
	A fresh travel experience	40%	3%	5%	7%	39%	6%	Attractive / Indifferent
	To play to the theme park	15%	5%	2%	39%	37%	1%	Reverse / Indifferent
	to enjoy the luxurious or simple journey	33%	6%	3%	17%	20%	21%	Attractive
socialization	To visit friends or relatives	22%	9%	11%	12%	37%	9%	Indifferent
	To find your favorite companion	19%	3%	12%	12%	43%	11%	Indifferent
	To have more interaction with family	14%	24%	11%	5%	44%	1%	Indifferent
	To know people with similar interests	12%	13%	15%	19%	31%	10%	Indifferent
	To share interesting travel experiences with others	18%	1%	3%	19%	45%	15%	Indifferent
Prestige	to go to nice places where no one has never been there	25%	2%	1%	25%	25%	22%	Attractive / Reverse / Indifferent
	To change people's views to myself	10%	2%	2%	22%	59%	5%	Indifferent
	To find and get inspired by life	25%	7%	3%	15%	40%	9%	Indifferent
	to train a independent personality	24%	4%	8%	25%	23%	16%	Attractive / Reverse / Indifferent
	To get a friend's attention	29%	14%	9%	5%	41%	3%	Indifferent

Tour Service Improvement

During this stage, this study employs QFD to develop a two-stage deployment, including service technical deployment and action plan deployment.

Service Technical Deployment

During the service technical deployment stage, extraction focuses on attractive and essential quality factors from a two-dimensional quality factor classification used to individually make up demand and service items to deploy service in a technical manner through ensuring quality. The investigation and analysis includes eleven attractive quality key elements of attributes used in this study to construct the foundation in order to improve the proposed action scheme and further tourism service quality. Based on analysis of attractive quality factor and the travel literature, this study proposes five dimensions of travel-service technology, including: tour guide dimension, accommodation dimension, catering dimension, attraction content dimension, and activities dimension, which then used to further expand technical items. The tour guide dimension is defined by tourist agency staff and related support activities to guide customers during their visits, with items including guide specialization, humor, and persuasiveness. The accommodation dimension is defined comprising the environment where tourists stay, and includes items such as grade of hotel, hotel theme of characteristics, integrity of facilities, hotel service, and so on. The catering dimension is defined in terms of the meals and beverages served to travelers, and includes such items as healthy meals and the recreational activities offered to diners. The attraction content dimension is defined in terms of worthwhile scenic spots and related recreational activities, and includes items such as the degree to which activities offered as scenic spots are interactive, the attractions of scenic spots, and the degree to which scenic spots are representative and well-known. The activities dimension is defined in terms of actions to attract customers to tour services, and includes items such as the value of optional activities, novel activities, and the degree of customization. To deploy service technology, this study connects with customer traveling motive and tour-serviced technical items which are provided by tourist agency through the relevant matrix and give each Quality item's weight according to each attractive quality percentage scored in Two-dimensional quality classification.

In the relevant matrix, this study assigns relevant symbols scores according to their strength, where ◎ means strongly relevant, with a relevant score of nine, ○ means indirectly relevant, with a relevant score of three, △ means only slightly relevant, with a relevant score of one, while a blank space with no symbol indicates a relevant score of zero. Figure 4 denotes the details of quality during the service technique deployment stage.

According to quality analysis, the top five items are degree of customization, value of optional activities, tour guides that show initiative in providing service, the possibility of participating in the activities at tourist attractions, and tourist guides providing flexible services, two of which belong to the activities dimension (degree of customization and value of optional activities), two belong to the tour guides dimension (tour guides actively providing service and tour guides providing flexible service), and one belongs to the attraction content dimension (the possibility of participating in activities at tourist attractions). The content of each item is shown below.

1. Degree of customization: This section reflects consumer demand for increasingly diverse activities, and thus companies must increasingly consider consumer choice in designing travel routes.

2. Value of optional activities: One item that can be strengthened is the company providing less expensive or more reasonably priced optional activities.

3. Tour guides actively provide service: Tourist agency staff should display initiative in identifying and observing customer needs, then providing timely service.

4. Participatory activities at tourist attractions: Every recreational activity offered as part of a tour should be adjusted according to customer expectations to meet the objective of encouraging customer participation in activities.

5. Tourist guides offering flexible services: Tour guides must fully understand customer reactions and changes in the environment, and respond by adjusting their service accordingly.

The Deployment of Action Plan

This stage involves implementation of an action plan with corresponding tourist service items to provide direction for tourist service planning and improvement. The key factors of the action plan follow the strategy of integrating overall tourist service items. Decision making thus must focus on comprehensive thinking, excluding from a single tourist service item. This research develops improvement action plans according to the result of Kano two-dimentional quality key element and tourist service attributes (Yang *et al.*, 2012). The planned scheme to achieve improvements in tourist service quality comprises four aspects: itinerary design, serving planning, reliability, and communication.

1. The itinerary design dimension stresses activities related to action planningand involves:

    (1) Regular proposal of activities, survey on customer expectations, and advise on appropriate adjustments.

    (2) Survey on popular recreational activities and accommodation and operation of basic itinerary design.

    (3) Actively providing detailed travel information, and customers choice.

2. The service planning dimension emphasizes service improvement in the tourism industryand includes:

    (1) Using customer feedback as reference to revise service.

    (2) Using customer advice to flexibly adjust service content.

    (3) Employing external contractors with abundant work experience to perform service planning.

3. The reliability dimension stresses the tourism industry attempting to build customer trust. and involves:

    (1) Organizing training courses on communication and expression for tour guides, and undergoing assessment on professional competence and knowledge of travel destinations.

    (2) Objectively selecting cooperation partners by building dependable information exchange channels in the traveling regions.

    (3) Emphasis put on industry certification, and offer of appropriate insurance.

4. The communication dimension stresses channels to share information between customers and the tourism industryand includes:

    (1) Organizing sharing of experiences before traveling, and supplyment of current information on destinations.

    (2) Developing guidebooks to help customers understanding destination culture.

    (3) Inviting customers to parties to share their travel experiences and memories.

In the action plan deployment, the service items regarded as demand items, are linked with the action program via the relation matrix. The weights of each service item are based on the calculation in the service-related matrix expansion. Scores are then assigned to the related matrix using different signs. ◎ is strongly relevant, with a score of nine. ○ is indirectly relevant, with a score of three. △ is weakly relevant, with a score of one. A blank means no relevance, and receives a score of zero. Figure 5 explains the construct of QFD in action plan deployment. The calculation process resembles that used in the last stage; the signs indicating different scores are used to multiply the weights of each service items. The values thus obtained are then totaled to yield absolute weights.

Based on the calculation results, this study ranks the top five items in terms of importance. (1). the utilization of external contractors with abundant work experience to perform service planning. (2). Periodical proposal of novel activity designs. (3). Activities for members to share their ideas after travel. (4). Conduction of customer investigations focused on popular tourist sites and accommodations. (5). Incorporation of customer feedback into the service items or used as a reference to correct itinerary. These five estimated items include two items in the itinerary design dimension, two items in the service dimension and one item in the communication dimension.

FIG. 4 SERVICE TECHNICAL DEPLOYMENT

		Accommodation dimension							Activities dimension						Catering dimension			Tour Guides dimension					Attraction Content dimension							Quality	Weight
		Grade of hotel	The degree of Comfort	The degree of service's politeness	theme or characteristic hotel	Facility Integrity of hotel	Service of hotel	With great Popularity	The value of optional activities, novel activities	Novel activities	The degree of customization	More flexible free times	Interactive activities	Local food	The degree of restaurant	Healthy meals	Recreational activities in dining place	The flexibility of services offered by tourist guides	Tour guides have the degree of initiative to introduction service	specialized degree of tour guides	Humorous degree	persuasiveness	Interesting activities in attraction content dimension	The possibility of Participating in the activities at scenic spots	attraction the activities at scenic spots entertaining spots	The initiative of attractions of known scenic spots	Represe ntative of well-known scenic spots	Smooth route		
knowledge	to know the characteristic culture	▽		○	▽	▽	○	▽	◎	▽	○	○	▽	○	▽			○	◎	◎	○	○	○	◎	◎	○	○	A	0.38
knowledge	to experience the novel and different life	▽		▽	○	▽	▽	▽	◎	○	○	○	○	○	○		▽	○	◎	▽	▽	▽	◎	◎	▽	▽	○	A	0.42
knowledge	to contact the new technology				○	▽		▽	◎	▽	○	▽					▽	▽		○				○				A	0.31
knowledge	to strengthen your language skill	▽			▽	▽	▽	▽	○		▽	▽					▽	○	○	○	▽							A	0.39
knowledge	to taste the local food	◎			○	▽	▽		▽		▽																	A	0.33
relaxation	to leave the current life circle	▽			○	▽	▽	○	▽	○	○	▽				▽	▽											A	0.38
relaxation	To have more free time to travel		▽		○	▽	▽		▽		◎	◎	▽		▽	▽	▽	◎		○				○				A/I	0.47
entertainment	A fresh travel experience		▽	○	◎	▽	○		◎	◎	◎		▽	◎	○		◎	◎	○	○	▽		◎	◎	▽	○	○	A/I	0.4
entertainment	to enjoy the luxurious or simple journey	◎	▽			○	○	○	○	○			○	○		▽	○	○					○	○		○	○	A	0.33
prestige	to go to nice places where no one has never been there	○	◎		▽	○		▽	◎	◎	◎	▽	▽			▽	▽	○	◎			○	◎		▽	▽	▽	AR/I	0.25
prestige	to train a independent personality		○		▽	○	○	▽	◎		▽	○								▽		▽		○			○	AR/I	0.24
		7.51	3.29	2.76	8	2.97	4.52	3.18	16.21	6.38	17.22	9.04	3.18	8.13	2.42	1.53	6.12	12.66	14.26	7.35	3.9	3.4	12.03	14.16	5.14	7.27	8.46		

FIG. 5 THE DEPLOYMENT OF ACTION PLAN

		Itinerary design		Service planning			Reliability				Communication			weights
		Propose novel activities regularly, and take customers expect and advice for adjustment	Survey the popular recreational activities and accommodation is the basis of itinerary design	Tell the detailed traveling information actively, and supply different items for customer to choose.	Take the customers feedback as reference for service revise	According to customer's advice, adjust service content with flexibility	Employ the outer contractors with abundant working experience to do the service planning	Hold the training courses about communication and expression for tour guides, and undergo assessment for professional competence and the knowledge for	Objectively choose the partners for cooperation by building a dependable information exchange channel in the traveling regions.	Emphasized the certification of industry, and provide appropriate insurance.	Arrange the experiences sharing before traveling, and supply the present information for traveling region	Make a guidebook to make customer easily realize the traveling culture of tourist sites	Invite the customer to the parties to share their traveling experiences and memories.	
Accommodation dimension	Grade of hotel	○	◎	◎	○	▷	○		◎	◎	○	◎		7.51
Accommodation dimension	The degree of Comfort	○	○	○	◎	▷				○	○	○	○	3.29
Accommodation dimension	The degree of service's politeness	○	○	◎	○	▷	▷						◎	2.76
Accommodation dimension	theme or characteristic hotel	◎	○	◎	◎	▷	○		◎					8
Accommodation dimension	Facility Integrity	○	○	◎	◎	▷			◎	◎	○			2.97
Accommodation dimension	service of hotel	○	◎		▷	▷			◎	◎	○	○	◎	4.52
Accommodation dimension	With great Popularity	○	○	◎	◎	▷	○		◎	◎	○	◎	◎	3.18
Activities dimension	The value of optional activities, novel activities	◎	○	◎	▷	▷	◎	○	◎	○	○	○	◎	16.21
Activities dimension	novel activities	◎	▷	○	○	▷	○		○			○	○	6.38
Activities dimension	The degree of customization	◎	◎	◎	◎	◎	◎	○	◎	▷	○	◎	◎	17.22
Activities dimension	more flexible free times	◎	○	◎	▷	▷	○	○	○					9.04
Activities dimension	Interactive activities	◎		▷	○	○	▷	○	▷		○	▷	○	3.18
Catering dimension	Local food		▷	○	○	▷		▷	◎		◎	○	○	8.13
Catering dimension	The degree of resturant		○		○	▷			◎	◎	○		▷	2.42
Catering dimension	Healthy meals	○		▷		▷	▷			○	▷			1.53
Catering dimension	recreational activities in dining place	○	◎		▷	▷	◎	▷	◎		○			6.12
Tour Guides dimension	The flexibility of services offered by tourist guides	◎	▷		◎	◎	◎		○		○	◎	◎	12.66
Tour Guides dimension	Tour guides have the initiative to service	○	▷	▷	◎	◎	◎				○	◎	◎	14.26
Tour Guides dimension	specialized degree of tour introduction	◎	▷	▷	◎	◎	◎	○		○	◎	◎	◎	7.35
Tour Guides dimension	Humorous degree	▷		○	○	◎	○	◎			○		◎	3.9
Tour Guides dimension	persuasiveness	○			○	◎	○				○		▷	3.4
Content dimension	Interesting activities in attraction content dimension	◎	◎	○	◎	◎	◎	▷	○		○	◎	○	12.03
Content dimension	The possibility of Participating in the activities at entertaining spots	▷	◎	○	◎	◎	◎	○	○		○	○	○	14.16
Attraction Content dimension	The attractions of scenic spots	▷	◎	○	○	○	◎	◎	◎		◎	◎	◎	5.14
Attraction Content dimension	Representative of and well-known scenic spots	○	◎	○	○	○	○	◎	◎	▷	◎	◎	◎	7.27
Attraction Content dimension	Smooth route	○	◎	▷	◎	◎	◎	◎	▷	◎	○	◎	◎	8.46
	SUM	1047.19	1002.93	698.64	938.31	720.44	1118.33	651.72	916.7	312.06	929.69	627.26	1023.27	

Discussion

Based on the results of service item and action plan deployment, it has been found from this study that additional work experience with extensive and perfect external personnel service planning, customer integration with the proposed collection of specific implementation plan, and regular discussion meetings strongly influence the five action steps, so performance can be improved through elaborate planning by the above five agencies.

1. Employ external contractors with abundant work experience to perform service planning.

Service planning involves hiring staff, setting stringent standards for the selection to resume in the initial years, both on a project basis and to pursue other objectives, and conduction of interviews for conversation, creativity, and abstract evaluation of projects.

2. Pay attention to customer advice

Travel agencies can use various channels (e.g. official websites, invitation only activities for guests, and online communities) to gather valuable customer feedback. Additionally, the members holding following tourism activity are also important to share.

3. Hold regular meetings

By brainstorming through regular meetings, tourist industry operators can collect and integrate ideas and recommendations and thus devising better service plans and itineraries.

Conclusions

With the growth of tourism, as well as increasing traveler demand for high quality service, the tourism industry increasingly considers customer psychology, and how to adjust services to better match customer desires. This study comprises three parts, that is, travel demand survey, key tourism quality factor extraction, and tourist service improvement. The main objective of the travel demand survey is to gather information on the travel motivation literature and design a questionnaire to investigate traveler motivations. For the survey, the Kano model has extracted two-dimensional service quality for critical items. The quality function deployment method was then used to build and determine action plans and their implementation priority.

Based on the results, this study has obtained two key dimensions, namely the action itinerary design dimension and service planning dimension, which were then divided according to their properties to adjust the external environment and internal organizational changes. Based on properties of the external environment, itineraries and services are adjusted to achieve enhanced results, and the industry evolves over time to investigate and master changes in customer needs and thus enhancing overall competitiveness. The direction of internal organization is adjusted based on the planned service designed to provide additional work experience with exprienced external service planning staff, and external staff with implicit knowledge which enable the industry to understand changing customer needs regarding information gathering and establish an effective pipeline, and can also help the translation of tailor customer needs into actual programs, or concepts into innovative travel designs, such as through regular meetings to discuss views or integration and discussion to develop a workable solution. Additionally, the company should be held after the tour to help tour members shareing activities, in addition to collection of the latest and most effective source of customer information, as well as to establishment of business relationships with customers, satisfaction and repurchase rate are improved, and thus keeping competitiveness.

REFERENCES

Beerli, Asunción, and Martín, Josefa D. "Tourists? characteristics and the perceived image of tourist destinations: A quantitative analysis-a case study of Lanzarote, Spain." Tourism Management 25 (2004): 623-636.

Besterfield, Dale H., Besterfield-Michan, Carol, Besterfield, Glen H., and Besterfield-Sacre, Mary. Total Quality Management 3rd edition. New York: Prentice-Hall, Inc, 2003.

Büyüközkan, Gülçin, Feyzioğlu, Orhan, and Ruan, Da. "Fuzzy group decision-making to multiple preference

formats in quality function deployment." Computers in Industry, 58 (2007): 392–402.

Cha, Sukbin, McCleary, Ken W., and Uysal, Muzaffer. "Travel motivation of Japanese overseas travelers: a factor-cluster segmentation approach." Journal of Travel Research 31 (1995): 33-39.

Chon, Kye-Sung. "Understanding recreational travelers' motivation, attitude and Satisfaction." The Tourist Review 44 (1989): 3-7.

Crompton, John L. "Motivations of pleasure vacation." Annals of Tourism Research 6(1979): 408-424.

Dann, Graham M.S. "Anomie, ego-enhancement and tourism." Annals of Tourism Research 4 (1977): 184-194.

Dann, Graham M.S. "Tourism motivation: An appraisal." Annals of Tourism Research 8 (1981): 187-219.

Gnoth, Juergen. "Tourism motivation and expectation formation." Annals of Tourism Research 24 (1997): 283-304.

Hsu, Tsung-Shin, Pan, Chao-Hsien, and Yang, Chang-Lin. "A QFD Based Approach for Product Positioning." Journal of Chinese Institute of Industrial Engineers 14 (1997): 209-216.

Kano, Noriaki, Seraku, Nobuhiko, Takahashi, Fumio, and Tsuji, Shinichi. "Attractive quality and must-be quality." Journal of Japanese Society for Quality Control 14 (1984): 39-48.

Kim, Samuel Seongseop, Lee, Choong-Ki, and Klenosky, David B. "The influence of push and pull factors at Korean national parks." Tourism Management 24(2003):169-180.

Klenosky, David B. "The pull of tourism destinations: Ameans-end investigation." Journal of Travel Research 40(2002): 385-395.

Leary, Martin, and Burvill, Colin. "Enhancing the Quality Function Deployment Conceptual Design Tool." Journal of Mechanical Design 129 (2007): 701-708.

Matzler, Kurt, and Hinterhuber, Hans H. "How to make product development projects more successful by integrating Kano's model of customer satisfaction into quality function deployment." Technovation 18 (1998): 25-38.

Raharjo, Hendry, Brombacher, Aamout C., and Xie, Min. "Dealing with subjectivity in early product design phase:

A systematic approach to exploit Quality Function Deployment potentials." Computers & Industrial Engineering 55 (2008): 253–278.

Shahin, Arash. "Integration of FMEA and the Kano model: An exploratory examination." International Journal of Quality & Reliability Management 21 (2004): 731- 746.

Swanson, Kristen K., and Horridge, Patricia E. "Travel motivations as souvenir purchase indicators." Tourism Management 27 (2006): 671-683.

Tontini, Gerson. "Integrating the Kano Model and QFD for Designing New Products." Total Quality Management & Business Excellence 18 (2007): 599-612.

Uysal, Muzaffer, and Jurowski, Claudia. "Testing the push and pull factors." Annals of Travel Research 21 (1994): 844-846.

Von Dran, Gisela, Zhang, Ping, and Small, Ruth. "Quality Websites: An Application of the Kano Model to Website Design." Proceedings of the Fifth Americas Conference on Information Systems (1999): 13-15.

Yang, Chang-Lin, and Fang, Hsiao-Hua. "Integrating Fuzzy Logic into Quality Function Deployment for Product Positioning." Journal of Chinese Institute of Industrial Engineers 20 (2003): 275-281.

Yang, Chang-Lin, Huang, Rong-Hwa., and Chen, Chien-Chuan. "Applying QFD into Medical Device Supplier to Acquire Orders from International Medical Device Companies." Journal of Quality 13 (2006): 277-287.

Yang, Chang-Lin, Huang, Rong-Hwa., and Liao, Shu-Ju. "Customer requirement based quality planning and improvement for food and beverage management." ANQ Congress 2012 (2012): 1204-1211.

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